Immunogenetics

Editors
Jan Klein Tübingen, Germany
Erna Möller Stockholm, Sweden

Desk Editor
D. Devine Tübingen, Germany

Volume 39 · 1994

Editorial Board

C. A. Alper Boston, MA, USA
B. Blomberg Miami, FL, USA
R. E. Bontrop Rijswijk, The Netherlands
W. Briles DeKalb, IL, USA
P.-A. Cazenave Paris, France
C. David Rochester, MN, USA
R. L. Dawkins Nedlands, Western Australia
F. Figueroa Tübingen, Germany
K. Fischer Lindahl Dallas, TX, USA
T. J. Gill III Pittsburgh, PA, USA
E. Günther Göttingen, Germany
H. Hengartner Zürich, Switzerland
V. Hořejší Prague, Czechoslovakia
A. L. Hughes University Park, PA, USA
R. Hyman San Diego, CA, USA
M. Kasahara Sapporo, Japan
P. Klouda Bristol, England
J. A. López de Castro Madrid, Spain
R. G. Mage Bethesda, MD, USA
I. F. C. McKenzie Heidelberg, VIC, Australia
M. M. Miller Duarte, CA, USA
N. A. Mitchison Berlin, Germany
P. Parham Stanford, CA, USA
H.-G. Rammensee Tübingen, Germany
R. J. Riblet La Jolla, CA, USA
E. Simpson Harrow, England
A. Svejgaard Copenhagen, Denmark
R. Tosi Rome, Italy
E. J. Yunis Boston, MA, USA
R. M. Zinkernagel Zürich, Switzerland

Springer International

Immunogenetics

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institue where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

Special regulations for photocopies in the USA:

Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U. S. Copyright Law, provided a fee is paid. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0093-7711, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Printers: Ernst Kieser GmbH, Neusäss bei Augsburg, Germany

© Springer-Verlag
Berlin Heidelberg 1994

Printed in Germany

Author index

Abe, K. 194
Abraham, L. J. 15
Accolla, R. S. 8
Adamkiewicz, T. V. 218
Albert, E. D. 61, 300
Alejandro, R. 373
Alvarez, A. M. 40
Andersson, L. 355
Ando, A. 194
Andreas, A. 300
Angelisová, P. 249
Antczak, D. F. 448
Arroyo, J. 40
Aruffo, A. 329
Auffray, C. 71, 221, 395

Bach, F. H. 218
Baker, E. 294
Balas, A. 452
Balbin, M. 187
Barber, D. F. 378
Bard, J. 109
Beauchamp, G. K. 109
Bebo, B. F., Jr. 450
Beier, D. R. 322
Bernot, A. 221
Bettinotti, M. P. 61, 300
Blachere, N. E. 93
Bonardelle, D. 178
Bönisch, J. 61
Bontrop, R. E. 81
Boon, T. 121
Borelli, I. 114
Boyse, E. A. 109
Brasseur, F. 121
Briles, W. E. 71
Brorson, K. A. 412
Brostoff, S. W. 80
Bruining, J. 343
Bruley-Rosset, M. 68, 178
Brünnler, G. 61
Buetow, K. H. 48
Bugeon, L. 159

Cappello, N. 114
Carayanniotis, G. 21
Carlo, D. J. 80
Cascino, I. 114, 291
Cestari, T. 8
Chambon-Thomsen, A. 281
Champagne, E. 281
Chaplin, D. D. 48
Charlemagne, J. 201
Charmley, P. 138
Chen, P. 440
Chronopoulou, E. 21
Clanet, M. 281
Clayton, J. 281
Cooper, L. 359
Coppin, H. 281
Crew, M. D. 412
Croft, L. 160
Curran, M. 109
Cuturi, M.-C. 159

D'Alfonso, S. 114, 150
David, C. 130
Dawkins, R. L. 15
Day, C. E. 335
De Krijger, R. 343
De Lange, G. G. 187
De La Selle, V. 178
De Lerma Barbaro, A. 8
De Pablo, M. R. 79, 219
De Plaen, E. 121
De Smet, C. 121
Díez-Orejas, R. 40
Disteche, C. 322
Dively, J. P. 80
Douglass, C. A. 412
Dushkin, H. 322

Easteal, S. 160
Edelhoff, S. 322
Eki, T. 194
Emi, N. 329
Epstein, L. D. 404
Essaket, S. 281

Falk, K. 74, 230, 379
Faure, F. 213
Feige, U. 155
Fellah, J. S. 201
Feng, H. 48
Fernandez, J. M. 378
Fischer Lindahl, K. 381
Fiucci, G. 437
Flajnik, M. F. 1
Frank, M. B. 428

Galeazzi, M. 291
Gallagher, A. 432
Gallin, J. I. 272
Garber, T. L. 257
Garcia-Sanchez, F. 452
Garrido, F. 161
Gasser, D. L. 48
Gasser, J. 155
Gaulard, P. 213
Giegerich, G. 367
Gill, T. J., III 59, 301, 447
Giordano, M. 114
Gnau, V. 74
Gold, D. P. 367
Goldberg, E. H. 363
Goldner-Sauve, A. 48
Gomez-Reino, F. 452
Goto, R. 71
Grahovic, B. 379
Grubb, A. 187
Grubb, R. 187
Grünig, G. 448
Gumley, T. P. 390
Günther, E. 351
Gustafsson, K. 355
Guttridge, M. G. 378

Haas, J. P. 61
Hanson, J. 130
Haq, T. 48
Harms, J. S. 372
Harrison, J. E. B. 375
Heine, L. 351
Hercend, T. 213
Hilgert, I. 249
Himmler, A. 448
Hoffman, H. A. 29
Holland, S. M. 272
Hood, L. 138
Hořejší, V. 249
Houchins, J. P. 218
Howard, C. J. 418
Huang, D. 286
Huang, F. 444
Huard, B. 213
Huchet, R. 178
Hughes, A. L. 257
Hui, K. M. 168
Hünig, T. 367
Hunt, C. 48

Ikemura, T. 194
Imai, T. 194
Inoko, H. 194
Isegawa, Y. 243
Isono, T. 243, 418

Jackson, S. H. 272
Jacques, C. 201
Jiang, W.-M. 375
Jones, C. 329
Jung, G. 74, 230

Kalden, J. R. 207
Kaminsky, S. G. 276
Kasahara, M. 1
Kawata, H. 194
Keller, E. 61, 300
Kelly, A. P. 56
Kienker, L. J. 296, 298
Kikuti, Y. Y. 194
Kim, C. J. 418
Kirisits, M. J. 59, 301
Kozak, C. A. 272
Kreisler, M. 79, 219
Krellner, P. H. 207
Krissansen, G. W. 375
Kuipers, J. G. 444
Kunz, H. W. 59, 307, 447
Kuppers, R. C. 404
Kuziel, W. A. 296

Langlois von den Bergh, R. 343
Lee, D. M. 289
Leelayuwat, C. 15
Leung, E. 375
Lewin, H. A. 316
Li, Z. 93
Lim, S. P. 168
Linthicum, D. S. 450
Lomax, K. J. 272
Lopez de Castro, J. A. 378
Lundeen, K. A. 80
Lurquin, C. 121

Malech, H. L. 272
Marello, K. L. 432
Marken, J. S. 329
Marshall, B. 15
Mattei, M.-G. 428
Mazzola, B. 114
McClive, P. J. 286
McKeever, D. J. 432
McKenzie, I. F. C. 390
McKinney, D. M. 440
McMillan, M. 440
McNicholas, A. 300
McSherry, C. 218
Mead, P. E. 375
Meenzen, C. M. 207
Melano, R. 377
Miconnet, I. 68, 178
Milde, K. F. 373
Miller, M. M. 71
Momigliano Richiardi, P. 114, 150, 291
Morahan, G. 286
Moreno, M. E. 79
Moriwaki, K. 381
Morozzi, G. 291
Müller, B. 359

Nakamura, I. 276
Nesbitt, M. N. 363
Nevinny-Stickel, C. 61
Nickerson, D. 138
Noonan, F. P. 29

Okamoto, N. 194
Oksenberg, J. R. 374
Ord, D. C. 322
Outschoorn, I. M. 404

Pando, M. 377
Park, C. 316
Parker, K. E. 159
Pastori, R. L. 373
Paul, C. 61
Pease, L. R. 371
Pedrinaci, S. 130
Peran, F. 161
Peruccio, D. 114
Petzl-Erler, M. L. 377
Pierce, J. C. 48
Pinelli, M. 15
Pluschke, G. 155
Pogulis, R. J. 371
Powis, S. H. 56
Print, C. G. 375
Pullen, J. K. 371

Raaphorst, F. M. 343
Rammensee, H.-G. 74, 230, 379
Rao, V. P. 21
Raybourne, R. B. 444
Rees, D. 363
Reichstetter, S. 207

Riond, J. 281
Ristori, G. 291
Robinson, M. A. 335
Roderíguez, F. 161
Roger, T. 68
Rohren, E. M. 371
Rose, N. R. 404
Roth, M.-P. 281
Rötzschke, O. 74, 230, 379
Ruberti, G. 437
Rüegg, D. 155
Ruiz-Cabello, F. 161
Russell, G. C. 432

Sagai, T. 381
Salgar, S. K. 447
Salter, R. D. 266
Salter-Cid, L. 1
Salvetti, M. 291
Sánchez-Pérez, M. 40
Sanderson, F. 56
Sandrin, M. S. 390
Sartoris, S. 8
Satz, M. L. 377
Sawai, H. 301, 447
Schendel, D. 379
Schmitt, K. 335
Schoenwald, U. 61
Scholz, S. 300
Schröder, J. P. 329
Scornik, J. 78, 379
Seldin, M. F. 289
Seman, M. 68
Seto, A. 243, 418
Shaw, S. 40
She, J. X. 78, 379
Shiroishi, T. 381
Smyth, M. J. 294
Sorda, J. 194
Soulillou, J.-P. 159
Spies, T. 48
Splitter, G. A. 372
Spooner, R. L. 432
Spurr, N. K. 329
Srivastava, P. K. 93
Steinman, L. 374
Sternberg, N. L. 48
Stevanović, S. 74, 230
Sutherland, G. R. 294
Szafer, F. 374

Takahata, N. 146
Tedder, T. F. 322
Templeton, J. W. 257
Terhorst, C. 359
Theiler, G. 377
Tischmann, C. 155
Tomonari, K. 65
Tomoyoshi, T. 418
Torres-Nagel, N. E. 367
Tosi, R. 114, 291
Toyoda, Y. 381
Tregaskes, C. R. 423
Tridente, G. 8
Triebel, F. 213
Trowsdale, J. 56
Truckenbrodt, H. 61
Tucek, C. 178
Tucker, P. W. 296, 298

Udono, H. 93

Van Bergen, J. 343
Van den Elsen, P. J. 343
Van der Bruggen, P. 121
Van der Keur, M. 343
Van Tol, M. J. D. 343
Vardimon, C. 59
Vicario, J. L. 452
Vilches, C. 79, 219
Virtaneva, K. I. 329
Von Schantz, T. 395
Vossen, J. M. 343
Wakeland, E. K. 78, 379
Walter, L. 351
Wang, J. 444
Wassmuth, R. 207
Watkins, D. I. 257
Watson, J. D. 375
Watson, M. L. 289
Wen, J. 444
Williams, K. M. 444
Wittzell, H. 395
Woodford-Thomas, T. A. 98
Wroblewski, J. M. 276

Xu, A. 316

Yamazaki, K. 109
Yang, Y. 375
Yao, Z. 61
Yokoyama, K. 194
Yoshino, M. 381
Young, J. R. 423
Yu, D. T. Y. 444

Zhang, G. 423
Zhang, L. P. 78, 379
Zhou, L.-J. 322
Zoorob, R. 71, 221, 395

Subject index

Air-1 trans-activator 8
Allelic polymorphism
–, *TAP* genes 374
Allotype differences
–, rat 159
–, heavy chain constant region 159
Amino acid substitutions
–, H-2L^d molecule 440
Announcements 220
Autoimmune diseases
–, promoter region polymorphism 291
Autoimmune disease susceptibility
–, polymorphic MHC region 15
Axolotl
–, Ig heavy chains 201

Bat-1 genes
–, multiple class I loci 276
–, *H-2D* region 276
BoLA class I loci 257
BoLA haplotypes
–, *DQB* genes 316
–, *DQ* region 316
Bos indicus
–, *DRB* second exons 432
Brazilian Indians
–, *HLA-DR6* allele 377
Breast tumor cell lines
–, HLA 161
–, expression 161
Carboxy-termini
–, divergent 218
–, natural killer lectin-like receptors 218
Cattle
–, EnhancerA/IRS region 372
–, Fcγ RII 423
Caucasians
–, G3m(b) and (g) allotypes 187
CD7
–, mouse 289
CD19
–, human 322
–, chromosome 16 322
CD37, CD53, TAPA-1, R2/C33
–, MHC II glycoproteins 249
Cdc25 phosphatase
–, mouse 98
–, lymphocytes 98
Chicken
–, *Mhc* genes 221
Chromosome 4
–, inbred mouse strains 286
Chromosome 7
–, mouse 322
–, CD19 322
Chromosome 10
–, mouse 363
–, *Skn 2* 363
–, *Myb* 363
Chromosome 16
–, human 322
–, CD19 322
Chromosome 19p13.3
–, *Met-ase 1* 294
Class I expression
–, HLA 161
–, breast tumor cell lines 161
Class I HLA molecules
–, intracellular transport 266
Cps-1, *Hsp70* loci
–, mouse 48
–, *H-2* complex 48
Cw6.2 phenotype
–, *HLA-C* allele 79

Divergent
–, carboxy-termini 218
–, natural killer lectin-like receptors 218
Dog
–, lymphocyte antigen CD28 373
DQB genes
–, *BoLA* haplotypes 316
–, *DQ* region 316
DRB second exons
–, *Bos indicus* 432
DR2-DRB1 allele
–, German family 300

EnhancerA/IRS region
–, cattle 372
Erratum 37, 160
Expression

–, HLA 161
–, breast tumor cell lines 161

FAS cDNA
–, gene sequence 437
Fcγ RII
–, cattle 423
Fetal H-2 odortypes
–, mouse 109

G3m(b) and (g) allotypes
–, Caucasians 187
Gene conversion 138
Gene sequence
–, *FAS* DNA 437
German family
–, *DR2-DRB1* allele 300
Gmcs factor
–, nucleotide sequence 80
–, rat 80
Grc-G/C region
–, rat 301
–, *TL*-like loci 301
GVHR
–, minor histocompatibility antigens 178

H-2 complex
–, *Cps-1*, *Hsp70* loci 48
H-2D region
–, *Bat-1* genes 276
–, multiple class I loci 276
H-2T24, *Pema*T24
–, mouse 412
–, *Peromyscus maniculatus* 412
H-2K^{j}, H-2K^{u}
–, structural analysis 371
H-2L^{d} molecule
–, amino acid substitutions 440
Heat shock proteins
–, peptides 93
Heavy chain constant region
–, rat 159
–, allotype differences 159
HLA
–, expression 161
–, breast tumor cell lines 161
HLA-A allele
–, Spanish family 452
HLA-A2 subtype 378
HLA-B*2705
–, peptide motif 444
HLA-B*2702, B*2705
–, peptide motifs 74
*HLA-B*2706*
–, nucleotide sequence 219
HLA-B27 molecules
–, transgenic mice 130
HLA-DM
–, polymorphism 56
HLA class I/class II interaction
–, juvenile chronic arthritis 61
HLA-DP mutant cell line
–, molecular analysis 40
HLA-DQB1 gene
–, sequence variability 207
HLA-DR6 allele
–, Brazilian Indians 377

HLA-DR, DQ, DP ligands
–, peptide motifs 230
HLA supratypes
–, Italian population 114
Horse
–, MHC class II *DRB* genes 355
–, interferon-gamma cDNA 448
Hsp70 genes
–, *Xenopus Mhc* complex 1
Human
–, *MAGE2* gene 121
–, sequence and expression 121
–, MHC region 194
–, kinesin-related gene 194
–, LAG-3-encoded protein 213
–, CD19 322
–, chromosome 16 322
–, *TCR* beta gene complex 335
–, recombination 335
–, isolation 375
–, *ITBG7* integrin gene 375
–, TAPA1 329
–, polymorphism 138
–, T-cell receptor 138
–, recombination 335
–, pig 359
–, *syk* 359

Ig heavy chain variable regions
–, Mexican axolotl 201
IgG2a antibody response
–, mouse 404
–, *Igh* locus 404
Ig heavy chain variable regions
–, axolotl 201
Igh locus
–, mouse 404
–, IgG2a antibody response 404
Immunosuppression susceptibility
–, mouse 29
Inbred mouse strains
–, chromosome 4 286
Interferon-gamma cDNA
–, horse 448
Intracellular transport
–, class I HLA molecules 266
IRF-1-deficiency
–, mutant cell line 168
Isolation
–, *ITGB7* integrin gene 375
–, human 375
Italian population
–, HLA supratypes 114
ITGB7 integrin gene
–, human 375
–, isolation 375

Juvenile chronic arthritis
–, *HLA* class I/class II interaction 61

Kinesin-related gene
–, MHC region 194
–, human 194

LAG-3-encoded protein
–, human 213
Lymphocyte antigen CD28
–, dog 373
Lymphocytes
–, cdc25 phosphatase 98
–, mouse 98

MAGE2 gene
–, human 121
–, sequence and expression 121
Major histocompatibility complex
–, recombinational hotspots 381
–, mouse 381
Mammary tumor proviruses
–, mouse 65
–, Tcrb-V12-specific superantigens 65
Met-ase 1
–, chromosome 19p13.3 294
MHC class II *DRB* genes
–, horse 355
MHC gene *RT1.A^{l}*
–, rat 447
MHC II glycoproteins
–, CD37, CD53, TAPA-1, R2/C33 249
MHC region
–, human 194
–, kinesin-related gene 194
Mhc-DQA, *-DAB* second exon
–, nucleotide sequence 81
–, nonhuman primate 81
Mhc B genes
–, *Rfp-y* 71
–, homology 71
Mhc class Ib gene
–, rat 351
Mhc class IIB haplotypes
–, ring-necked pheasant 395
Mhc genes
–, chicken 221
Minor histocompatibility antigens
–, GVHR 178
Molecular analysis
–, HLA-DP mutant cell line 40
Mouse
–, mammary tumor proviruses 65
–, Tcrb-V12-specific superantigens 65
–, polymorphism 68
–, *Tcrg-V1*, *-2*, *-4* genes 68
–, *Tcr-gA*, *-Gc* haplotypes 68
–, cdc25 phosphatase 98
–, lymphocytes 98
–, fetal H-2 odortypes 109
–, CD7 289
–, p47^{phox} 272
–, *Tcrg-V* genes 296, 298
–, *Vg1.1-Vg1.2* intergenic region 296
–, *Vg4-Vg3* intergenic region 298
–, chromosome 7 322
–, CD19 322
–, chromosome 10 363
–, *Skn 2* 363
–, *Myb* 363
–, thyroiditis susceptibility 21
–, immunosuppression susceptibility 29
–, *Cps-1*, *Hsp70* loci 48
–, major histocompatibility complex 381
–, recombinational hotspots 381
–, *Thb* locus
–, IgG2a antibody response 404

–, *Igh* locus 404
–, *H-2T24, PemaT24* 412
–, TNR type I receptor 450
–, nucleotide sequence 450
Multiple class I loci
–, *Bat-1* genes 276
–, *H-2D* region 276
Multiple sclerosis
–, *TCRBV* gene usage 281
Mutant cell line
–, IRF-1-deficient
Myb
–, mouse 363
–, chromosome 10 363
–, *Skn 2* 363

Natural killer lectin-like receptors
–, divergent carboxy-termini 218
Nonhuman primate
–, nucleotide sequences 81
–, *Mhc-DQA, -DAB* second exon 81
Nucleotide sequences
–, *HLA-DRB1* allele 78
–, rat 80
–, gmcs factor 80
–, nonhuman primate 81
–, *Mhc-DQA, DAB* second exon 81
–, *HLA-B*2706* 219
–, mouse 450
–, TNR type I receptor 450

Odd page 380

P47^{phox}
–, mouse 272
Peptide motif
–, HLA-B*2705 444
Peptide motifs
–, HLA-B*2702, B*2705 74
–, HLA-DR, DQ, DP ligands 230
Peptides
–, heat shock proteins 93
Peromyscus maniculatus
–, mouse 412
–, *H-2T24, PemaT24* 412
Pig
–, *syk* 359
–, human 359
Polymorphic MHC region
–, autoimmune disease susceptibility 15
Polymorphic variation
–, *TNFA* promoter region 150
Polymorphism
–, *Tcrg-V1 -2, -4* genes 68
–, *Thb* locus 390
–, *Tcr-gA, -Gc* haplotypes 68
–, *HLA-DM* 56
–, GVHR 178
–, *FAS* cDNA gene sequence 437
–, T-cell receptor 138
Promoter region polymorphism
–, autoimmune diseases 291

Rabbit
–, TCR beta chains 243
Rat
–, nucleotide sequence 80
–, gmcs factor 80
–, TCRα-chain-encoding genes 155
–, heavy chain constant region 159
–, *Mhc* class Ib gene 351
–, *TNFA* locus 59
–, *TL*-like loci 301
–, *grc-G/C* region 301
–, Tcra-V4, -V8 gene products 367
–, MHC gene *RT1.A^{l}*
Recombination
–, human 335
–, *TCR* beta gene complex 335
Recombinational hotspots
–, mouse 381
–, major histocompatibility complex 381
Rfp-y
–, homology 71
–, *Mhc B* genes 71
Ring-necked pheasant
–, *Mhc* class IIB haplotypes 395

Sequence and expression
–, *MAGE2* gene 121
–, human 121
Sequence variability
–, *HLA-DQB1* gene 207
Skn 2
–, chromosome 10 363
–, *Myb* 363
–, mouse 363
Spanish family
–, *HLA-A* allele 452
Structural analysis
–, H-2K^{j}, H-2K^{q} 371
Syk
–, pig 359
–, human 359

TAP genes
–, allelic polymorphism 374
TAPA1
–, human 329
T-cell receptor
–, polymorphism 138
–, human 138
TCRα-chain-encoding genes
–, rat 155
TCR beta chains
–, rabbit 243
TCR beta gene complex
–, human 335
–, recombination 335
TCR rearrangements
–, *TCRAV, TCRBV* gene families 343
Tcr-gA, -Gc haplotypes
–, mouse 68
–, polymorphism 68
–, *Tcrg-V1, -2, -4* genes 68
Tcra-V4, -V8 gene products
–, rat 367
TCRAV, TCRBV gene families
–, TCR rearrangements 343
Tcrb-V12-specific superantigens
–, mouse 65
–, mammary tumor proviruses 65
TCRBV gene usage
–, multiple sclerosis 281
Tcrg-V1, -2, -4 genes
–, polymorphism 68
–, mouse 68
–, *Tcr-gA, -Gc* haplotypes 68
Tcrg-V genes
–, mouse 296, 298
–, *Vg1.1-Vg1.2, Vg4-Vg3* intergenic regions 296, 298
Thyroiditis susceptibility
–, mouse 21
TL-like loci
–, rat 301
–, *grc-G/C* region 301
TNFA locus
–, rat 59
TNFA promoter region
–, polymorphic variation 146
TNR type I receptor
–, mouse 450
–, nucleotide sequence 450
Transgenic mice
–, HLA-B27 molecules 130

Vg1.1-Vg1.2, Vg4-Vg3 intergenic regions
–, *Tcrg-V* genes 296, 298
–, mouse 296, 298

Xenopus Mhc complex
–, *Hsp70* genes 1